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**Draft Industrial Area
Sampling and Analysis Plan
FY04 Addendum #IA-04-06
IHSS Group 800-3**

November 2003

Approved by:

IA-A-001815

**Draft Industrial Area
Sampling and Analysis Plan
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IHSS Group 800-3**

Approval received from the Colorado Department of Public Health and Environment
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Approval letter is contained in the Administrative Record.

November 2003

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ACRONYMS

AL	action level
Be	beryllium
DOE	U.S. Department of Energy
FY	Fiscal Year
HPGe	high-purity germanium
HRR	Historical Release Report
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
MDL	method detection limit
ug/kg	micrograms per kilogram
N/A	not applicable
NPWL	New Process Waste Line
OPWL	Original Process Waste Line
PAC	Potential Area of Concern
PCB	polychlorinated biphenyl
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
RFCA	Rocky Flats Cleanup Agreement
SAP	Sampling and Analysis Plan
SVOC	semivolatile organic compound
UBC	Under Building Contamination
VOC	volatile organic compound
WRW	wildlife refuge worker

1.0 INTRODUCTION

This Industrial Area (IA) Sampling and Analysis Plan (SAP) (IASAP) (DOE 2001) Addendum #IA-04-06 includes Individual Hazardous Substance Site (IHSS) Group-specific information, sampling locations, and potential contaminants of concern (PCOCs) for IHSSs, Potential Areas of Concern (PACs), and Under Building Contamination (UBC) Sites proposed for characterization during Fiscal Year (FY) 04. This IASAP Addendum is a supplement to the IASAP (DOE 2001) and includes data and proposed sampling locations for the IHSS Group and associated IHSS, PAC, and UBC Sites listed in Table 1. The locations of the IHSS Group, and associated IHSS, PAC and UBC Sites are shown on Figure 1.

Table 1
IASAP Addendum #IA-04-06 IHSS Group

IHSS Group	IHSS/PAC/UBC Site
800-3	UBC 883 – Roll and Form Building
	PAC 800-1200 – Valve Vault 2
	IHSS 000-121 – Tank 25 – OPWL 750-Gallon Steel Tank
	IHSS 000-121 – Tank 26 – OPWL 750-Gallon Steel Tank
	PAC 800-1201 – Radioactive Site South of Building 883

2.0 EXISTING CHARACTERIZATION INFORMATION

Existing concentrations and activities greater than background means plus two standard deviations, or method detection limits (MDLs), are presented on Figure 2. There are two previous sampling locations at IHSS Group 800-3 (DOE 2000). Table 2 presents the PCOCs and proposed sampling methodology. Existing information and data for these IHSSs and PACs are available in Appendix C of the IASAP (DOE 2001), the Historical Release Reports (HRRs) (DOE 1992-2002), and the IA Data Summary Report (DOE 2000).

Previous data at IHSS Group 800-3 indicate radionuclides and metals are present at concentrations greater than background means plus two standard deviations and semivolatile organic compounds (SVOCs) are present at concentrations greater than MDLs. There are no Rocky Flats Cleanup Agreement (RFCA) wildlife refuge worker (WRW) or ecological receptor action level (AL) (DOE et al. 2003) exceedances. Results from one location (PCB Site 15) indicate the presence of polychlorinated biphenyls (PCBs).

Table 2
PCOCs for IHSS Group 800-3

IHSS/PAC/UBC Site	PCOCs	Media	Data Source	Sampling Location Method
UBC 883 – Roll and Form Building	Radionuclides Metals (Be) VOCs SVOCs	Subsurface soil	HRRs (DOE 1992-2002) Process knowledge (IASAP [DOE 2001])	Statistical and biased sampling
PAC 800-1200 – Valve Vault 2	Radionuclides Metals (Be) VOCs SVOCs	Subsurface soil	HRRs (DOE 1992-2002) Process knowledge (IASAP [DOE 2001])	Biased sampling
IHSS 000-121 OPWL Tank 25	Radionuclides Metals (Be) VOCs SVOCs	Subsurface soil	HRRs (DOE 1992-2002) Process knowledge (IASAP [DOE 2001])	Biased sampling
IHSS 000-121 OPWL Tank 26	Radionuclides Metals (Be) VOCs SVOCs	Subsurface soil	HRRs (DOE 1992-2002) Process knowledge (IASAP [DOE 2001])	Biased sampling
PAC 800-1201 – Radioactive Site South of Building 883	Radionuclides	Surface soil	HRRs (DOE 1992-2002)	Biased sampling
PCB Site 15	Radionuclides Metals (Be) SVOCs PCBs Dioxin/Furan	Surface soil	Soil-Water Database	Biased sampling
Storage Area West of Building 883	Radionuclides Metals (Be) SVOCs	Surface soil	Undocumented historical knowledge	Biased sampling

Be – beryllium

VOC – volatile organic compound

SVOC – semi-volatile organic compound

PCBs – polychlorinated biphenyls

3.0 SAMPLING

The proposed sampling specifications (number and type of samples) for IHSS Group 800-3 are summarized in Table 3, shown on Figure 3, and listed in Table 4. The IASAP 22-meter statistical grid was applied at UBC 883, and biased sampling locations were added at sumps, tanks, pits, and Original Process Waste Lines (OPWL). Biased sampling will be implemented at PACs 800-1200 and 800-1201. The transformer locations north of Building 883 (PCB Site 15) and a storage area west of the building will also be characterized as part of this project (Figure 3).

Proposed new sampling locations are the starting point for IHSS Group characterization. After characterization starts, the number and type of samples may change based on sample results. Statistical sampling locations within a building footprint may be adjusted in the field to collect samples from specific building features. If contaminant concentrations are found to be above ALs near the grid boundary, additional samples will be collected in consultation with the regulatory agencies, and a contact record will be issued. Sampling locations will be field-checked and the locations adjusted through the consultative process. Field and other adjustments will be made as necessary as the project progresses.

Table 3
IHSS Group 800-3 Sampling Summary

Category	Total
Number of Sampling Locations	51
Number of Samples	61
Number of Radionuclide Analyses	61
Number of Metal Analyses	57
Number of VOC Analyses	48
Number of SVOC Analyses	57
Number of PCB Analyses	4
Number of Dioxin/Furan Analyses	1

4.0 REFERENCES

DOE, 1992 – 2002, Historical Release Reports for the Rocky Flats Plant, Golden, Colorado.

DOE, 2000, Rocky Flats Environmental Technology Site Industrial Area Data Summary Report, Golden, Colorado, September.

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

DOE, CDPHE, EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

Table 4
Sampling Specifications for IHSS Group 800-3

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
UBC 883	CE37-008	2083736.649	748832.866	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location
	CE37-008	2083736.649	748832.866	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location
	CE37-008	2083736.649	748832.866	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location
	CE37-008	2083736.649	748832.866	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location
	CF36-005	2083782.400	748696.326	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location
	CF36-005	2083782.400	748696.326	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location
	CF36-005	2083782.400	748696.326	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location
	CF36-005	2083782.400	748696.326	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location
	CF36-006	2083830.085	748750.272	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location
	CF36-006	2083830.085	748750.272	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location
	CF36-006	2083830.085	748750.272	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location
	CF36-006	2083830.085	748750.272	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location
	CF36-007	2083900.646	748735.947	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location
	CF36-007	2083900.646	748735.947	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location
	CF36-007	2083900.646	748735.947	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location
	CF36-007	2083900.646	748735.947	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location
	CF37-021	2083784.335	748886.811	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location

IHSS/PAC/TUBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-021	2083784.335	748886.811	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-021	2083784.335	748886.811	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-021	2083784.335	748886.811	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	
CF37-022	2083832.021	748940.756	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-022	2083832.021	748940.756	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-022	2083832.021	748940.756	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-022	2083832.021	748940.756	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	
CF37-023	2083759.525	748764.596	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-023	2083759.525	748764.596	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-023	2083759.525	748764.596	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-023	2083759.525	748764.596	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	
CF37-024	2083807.210	748818.541	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-024	2083807.210	748818.541	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-024	2083807.210	748818.541	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-025	2083854.896	748872.486	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-025	2083854.896	748872.486	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-025	2083854.896	748872.486	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-025	2083854.896	748872.486	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-026	2083902.581	748926.431	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-026	2083902.581	748926.431	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-026	2083902.581	748926.431	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-026	2083902.581	748926.431	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	
CF37-027	2083877.771	748804.217	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-027	2083877.771	748804.217	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-027	2083877.771	748804.217	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-027	2083877.771	748804.217	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	
CF37-028	2083925.456	748858.162	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Statistical Sampling Location	
CF37-028	2083925.456	748858.162	Subsurface Soil	0-0.5	Metals	N/A	6010	Statistical Sampling Location	
CF37-028	2083925.456	748858.162	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Statistical Sampling Location	
CF37-028	2083925.456	748858.162	Subsurface Soil	0-0.5	VOCs	8260	8260	Statistical Sampling Location	
CE37-004	2083721.154	748871.240	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 139 Scrubber	
CE37-004	2083721.154	748871.240	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 139 Scrubber	
CE37-004	2083721.154	748871.240	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 139 Scrubber	
CE37-004	2083721.154	748871.240	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 139 Scrubber	
CE37-005	2083732.822	748872.472	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 139 Chemical Mixer	
CE37-005	2083732.822	748872.472	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 139 Chemical Mixer	
CE37-005	2083732.822	748872.472	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 139 Chemical Mixer	

HSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CE37-005	2083732.822	748872.472	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 139 Chemical Mixer	
CE37-006	2083736.192	748846.079	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 139 Pit (first interval beneath pit)	
CE37-006	2083736.192	748846.079	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 139 Pit (first interval beneath pit)	
CE37-006	2083736.192	748846.079	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 139 Pit (first interval beneath pit)	
CE37-006	2083736.192	748846.079	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 139 Pit (first interval beneath pit)	
CE37-007	2083729.453	748827.548	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 138 Pit (first interval beneath pit)	
CE37-007	2083729.453	748827.548	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 138 Pit (first interval beneath pit)	
CE37-007	2083729.453	748827.548	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 138 Pit (first interval beneath pit)	
CE37-007	2083729.453	748827.548	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 138 Pit (first interval beneath pit)	
CF37-010	2083774.939	748871.349	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 139 Plenum	
CF37-010	2083774.939	748871.349	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 139 Plenum	
CF37-010	2083774.939	748871.349	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 139 Plenum	
CF37-010	2083774.939	748871.349	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 139 Plenum	
CF37-011	2083762.585	748846.641	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 139 Pit (first interval beneath pit)	

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-011	2083762.585	748846.641	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 139 Pit (first interval beneath pit)
CF37-011	2083762.585	748846.641	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 139 Pit (first interval beneath pit)
CF37-011	2083762.585	748846.641	Subsurface Soil	0-0.5	VOCs		8260		Biased at Room 139 Pit (first interval beneath pit)
CF37-012	2083865.350	748764.653	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 105 Pit (first interval beneath pit)
CF37-012	2083865.350	748764.653	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 105 Pit (first interval beneath pit)
CF37-012	2083865.350	748764.653	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 105 Pit (first interval beneath pit)
CF37-012	2083865.350	748764.653	Subsurface Soil	0-0.5	VOCs		8260		Biased at Room 105 Pit (first interval beneath pit)
CF37-013	2083917.014	748846.641	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 104 Pit (first interval beneath pit)
CF37-013	2083917.014	748846.641	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 104 Pit (first interval beneath pit)
CF37-013	2083917.014	748846.641	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 104 Pit (first interval beneath pit)
CF37-013	2083917.014	748846.641	Subsurface Soil	0-0.5	VOCs		8260		Biased at Room 104 Pit (first interval beneath pit)
CF37-014	2083897.921	748940.421	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 109 Process Drain Pit (first interval beneath pit)

HSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-014	2083897.921	748940.421	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 109 Process Drain Pit (first interval beneath pit)	
CF37-014	2083897.921	748940.421	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 109 Process Drain Pit (first interval beneath pit)	
CF37-014	2083897.921	748940.421	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 109 Process Drain Pit (first interval beneath pit)	
CF37-015	2083800.209	748893.812	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 102 Ball Mill Pit (first interval beneath pit)	
CF37-015	2083800.209	748893.812	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 102 Ball Mill Pit (first interval beneath pit)	
CF37-015	2083800.209	748893.812	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 102 Ball Mill Pit (first interval beneath pit)	
CF37-015	2083800.209	748893.812	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 102 Ball Mill Pit (first interval beneath pit)	
CF37-016	2083842.326	748907.289	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 109 Pit Near NPWL (first interval beneath pit)	
CF37-016	2083842.326	748907.289	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at Room 109 Pit Near NPWL (first interval beneath pit)	
CF37-016	2083842.326	748907.289	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Room 109 Pit Near NPWL (first interval beneath pit)	
CF37-016	2083842.326	748907.289	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at Room 109 Pit Near NPWL (first interval beneath pit)	
CF37-017	2083803.017	748842.148	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Room 102 Ball Mill Pit (first interval beneath pit)	

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-017	2083803.017	748842.148	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 102 Ball Mill Pit (first interval beneath pit)
CF37-017	2083803.017	748842.148	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 102 Ball Mill Pit (first interval beneath pit)
CF37-017	2083803.017	748842.148	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at Room 102 Ball Mill Pit (first interval beneath pit)
CF37-018	2083878.828	748823.055	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-018	2083878.828	748823.055	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-018	2083878.828	748823.055	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-018	2083878.828	748823.055	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-019	2083880.512	748851.695	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 105 Machine Pit
CF37-019	2083880.512	748851.695	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-019	2083880.512	748851.695	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-019	2083880.512	748851.695	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-020	2083875.458	748921.328	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 105 Machine Pit (first interval beneath pit)

THSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-020	2083875.458	748921.328	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-020	2083875.458	748921.328	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 105 Machine Pit (first interval beneath pit)
CF37-020	2083875.458	748921.328	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at Room 105 Machine Pit (first interval beneath pit)
CF38-006	2083902.975	748965.691	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at Room 100 Pit (first interval beneath pit)
CF38-006	2083902.975	748965.691	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at Room 100 Pit (first interval beneath pit)
CF38-006	2083902.975	748965.691	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at Room 100 Pit (first interval beneath pit)
CF38-006	2083902.975	748965.691	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at Room 100 Pit (first interval beneath pit)
CF37-002	2083834.004	748912.500	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWLTanks 25 and 26 (first interval beneath tanks)
CF37-002	2083834.004	748912.500	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at OPWLTanks 25 and 26 (first interval beneath tanks)
CF37-002	2083834.004	748912.500	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at OPWLTanks 25 and 26 (first interval beneath tanks)
CF37-002	2083834.004	748912.500	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at OPWLTanks 25 and 26 (first interval beneath tanks)
CF37-003	2083854.017	748911.322	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWLTanks 25 and 26 (first interval beneath tanks)

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-003	2083834.017	748911.322	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks)
CF37-003	2083834.017	748911.322	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks)
CF37-004	2083833.415	748840.688	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks)
CF37-004	2083833.415	748840.688	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	6.5-8.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWL Tanks 25 and 26 and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	6.5-8.5	Metals	N/A	6010		Biased at OPWL Tanks 25 and 26 and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	6.5-8.5	SVOCs	N/A	8270B		Biased at OPWL Tanks 25 and 26 and Pipeline
CF37-004	2083833.415	748840.688	Subsurface Soil	6.5-8.5	VOCs	8260	8260		Biased at OPWL Tanks 25 and 26 and Pipeline

HSSPAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-004	2083833.415	748840.688	Subsurface Soil	8.5 – 10.0	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-004	2083833.415	748840.688	Subsurface Soil	8.5 – 10.0	Metals	N/A	6010	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-004	2083833.415	748840.688	Subsurface Soil	8.5 – 10.0	SVOCs	N/A	8270B	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-004	2083833.415	748840.688	Subsurface Soil	8.5 – 10.0	VOCs	8260	8260	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at OPWL Tanks 25 and 26 (first interval beneath tanks) and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	6.5-8.5	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	6.5-8.5	Metals	N/A	6010	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	6.5-8.5	SVOCs	N/A	8270B	Biased at OPWL Tanks 25 and 26 and Pipeline	

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-005	2083854.017	748840.688	Subsurface Soil	6.5-8.5	VOCs	8260	8260	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	8.5 – 10.0	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	8.5 – 10.0	Metals	N/A	6010	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	8.5 – 10.0	SVOCs	N/A	8270B	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-005	2083854.017	748840.688	Subsurface Soil	8.5 – 10.0	VOCs	8260	8260	Biased at OPWL Tanks 25 and 26 and Pipeline	
CF37-006	2083881.093	748840.100	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	0-0.5	Metals	N/A	6010	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	0-0.5	SVOCs	N/A	8270B	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	6.5-8.5	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	6.5-8.5	Metals	N/A	6010	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	6.5-8.5	SVOCs	N/A	8270B	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	6.5-8.5	VOCs	8260	8260	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	8.5 – 10.0	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	8.5 – 10.0	Metals	N/A	6010	Biased at OPWL Pipeline Joint	
CF37-006	2083881.093	748840.100	Subsurface Soil	8.5 – 10.0	SVOCs	N/A	8270B	Biased at OPWL Pipeline Joint	

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-006	2083881.093	748840.100	Subsurface Soil	8.5 – 10.0	VOCs	8260	8260		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	0-0.5	VOCs	8260	8260		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	6.5-8.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	6.5-8.5	Metals	N/A	6010		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	6.5-8.5	SVOCs	N/A	8270B		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	6.5-8.5	VOCs	8260	8260		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	8.5 – 10.0	Radionuclides	HPGe	Alpha Spec		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	8.5 – 10.0	Metals	N/A	6010		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	8.5 – 10.0	SVOCs	N/A	8270B		Biased at OPWL Pipeline Joint
CF37-007	2083880.504	748902.493	Subsurface Soil	8.5 – 10.0	VOCs	8260	8260		Biased at OPWL Pipeline Joint
CE37-002	2083696.267	748903.082	Subsurface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec		Biased at OPWL Pipeline Joint Outside Building 883 and in Building 883 Storage Area
CE37-002	2083696.267	748903.082	Subsurface Soil	0-0.5	Metals	N/A	6010		Biased at OPWL Pipeline Joint Outside Building 883 and in Building 883 Storage Area
CE37-002	2083696.267	748903.082	Subsurface Soil	0-0.5	SVOCs	N/A	8270B		Biased at OPWL Pipeline Joint Outside Building 883 and in Building 883 Storage Area

HSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CE37-002	2083696.267	748903.082	Subsurface Soil	0-0.5	VOCs	8260	8260	Biased at OPWL Pipeline Joint Outside Building 883 and in Building 883 Storage Area	
CE37-002	2083696.267	748903.082	Subsurface Soil	6.5-8.5	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	6.5-8.5	Metals	N/A	6010	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	6.5-8.5	SVOCs	N/A	8270B	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	6.5-8.5	VOCs	8260	8260	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	8.5-10.0	Radionuclides	HPGe	Alpha Spec	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	8.5-10.0	Metals	N/A	6010	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	8.5-10.0	SVOCs	N/A	8270B	Biased at OPWL Pipeline Joint Outside Building 883	
CE37-002	2083696.267	748903.082	Subsurface Soil	8.5-10.0	VOCs	8260	8260	Biased at OPWL Pipeline Joint Outside Building 883	
PAC 800-1200 Valve Vault 2	2083698.033	748896.018	Subsurface Soil	14.5-16.5	Radionuclides	HPGe	Alpha Spec	Biased at Valve Vault 2	
CE37-003	2083698.033	748896.018	Subsurface Soil	14.5-16.5	Metals	N/A	6010	Biased at Valve Vault 2	
CE37-003	2083698.033	748896.018	Subsurface Soil	14.5-16.5	SVOCs	N/A	8270B	Biased at Valve Vault 2	
CE37-003	2083698.033	748896.018	Subsurface Soil	14.5-16.5	VOCs	8260	8260	Biased at Valve Vault 2	

HISS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF37-008	2083773.965	748894.252	Subsurface Soil	14.5-16.5	Radionuclides	HPGe	Alpha Spec	Biased at Suspected Leak at NPWL Connection to Building	
CF37-008	2083773.965	748894.252	Subsurface Soil	14.5-16.5	Metals	N/A	6010	Biased at Suspected Leak at NPWL Connection to Building	
CF37-008	2083773.965	748894.252	Subsurface Soil	14.5-16.5	SVOCS	N/A	8270B	Biased at Suspected Leak at NPWL Connection to Building	
CF37-008	2083773.965	748894.252	Subsurface Soil	14.5-16.5	VOCs	8260	8260	Biased at Suspected Leak at NPWL Connection to Building	
CF37-009	2083738.648	748892.487	Subsurface Soil	14.5-16.5	Radionuclides	HPGe	Alpha Spec	Biased at NPWL	
CF37-009	2083738.648	748892.487	Subsurface Soil	14.5-16.5	Metals	N/A	6010	Biased at NPWL	
CF37-009	2083738.648	748892.487	Subsurface Soil	14.5-16.5	SVOCS	N/A	8270B	Biased at NPWL	
CF37-009	2083738.648	748892.487	Subsurface Soil	14.5-16.5	VOCs	8260	8260	Biased at NPWL	
PAC 800-1201 Radioactive Site South of Building 883	2083805.750	748683.528	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased Because PAC is Too Small for the Statistical Grid	
CF36-002	2083845.776	748705.895	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased Because PAC is Too Small for the Statistical Grid	
CF36-003	2083846.953	748682.351	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased Because PAC is Too Small for the Statistical Grid	
CF36-004	2083821.054	748705.895	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased Because PAC is Too Small for the Statistical Grid	
Building 883 Storage Area	CE37-000	2083719.223	748880.714	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Building Storage Area
	CE37-000	2083719.223	748880.714	Surface Soil	0-0.5	Metals	N/A	6010	Biased at Building Storage Area

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CE37-000	2083719.223	748880.714	Surface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Building Storage Area	
CF37-001	2083769.844	748925.449	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Building Storage Area	
CF37-001	2083769.844	748925.449	Surface Soil	0-0.5	Metals	N/A	6010	Biased at Building Storage Area	
CF37-001	2083769.844	748925.449	Surface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Building Storage Area	
CF37-000	2083769.844	748880.714	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Building Storage Area	
CF37-000	2083769.844	748880.714	Surface Soil	0-0.5	Metals	N/A	6010	Biased at Building Storage Area	
CF37-000	2083769.844	748880.714	Surface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Building Storage Area	
CE37-001	2083718.046	748926.038	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Building Storage Area	
CE37-001	2083718.046	748926.038	Surface Soil	0-0.5	Metals	N/A	6010	Biased at Building Storage Area	
CE37-001	2083718.046	748926.038	Surface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Building Storage Area	
CE38-001	2083768.667	748982.545	Surface Soil	0-0.5	Radionuclides	HPGe	Alpha Spec	Biased at Building Storage Area	
CF38-001	2083768.667	748982.545	Surface Soil	0-0.5	Metals	N/A	6010	Biased at Building Storage Area	
CF38-001	2083768.667	748982.545	Surface Soil	0-0.5	SVOCs	N/A	8270B	Biased at Building Storage Area	
CF38-002	2083798.687	748993.140	Subsurface Soil	2.5-4.5	Radionuclides	HPGe	Alpha Spec	Biased at PCB Transformer (estimated depth at bottom of slab)	
CF38-002	2083798.687	748993.140	Subsurface Soil	2.5-4.5	Metals	N/A	6010	Biased at PCB Transformer (estimated depth at bottom of slab)	
CF38-002	2083798.687	748993.140	Subsurface Soil	2.5-4.5	SVOCs	N/A	8270B	Biased at PCB Transformer (estimated depth at bottom of slab)	
CF38-002	2083798.687	748993.140	Subsurface Soil	2.5-4.5	PCBs	N/A	8082	Biased at PCB Transformer (estimated depth at bottom of slab)	

HSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF38-002	2083798.687	748993.140	Subsurface Soil	2.5-4.5	Dioxin and Furan	N/A	8290		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-003	2083818.700	748992.551	Subsurface Soil	2.5-4.5	Radionuclides	HPGe	Alpha Spec		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-003	2083818.700	748992.551	Subsurface Soil	2.5-4.5	Metals	N/A	6010		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-003	2083818.700	748992.551	Subsurface Soil	2.5-4.5	SVOCs	N/A	8270B		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-003	2083818.700	748992.551	Subsurface Soil	2.5-4.5	PCBs	N/A	8082		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-004	2083866.966	748993.729	Subsurface Soil	2.5-4.5	Radionuclides	HPGe	Alpha Spec		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-004	2083866.966	748993.729	Subsurface Soil	2.5-4.5	Metals	N/A	6010		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-004	2083866.966	748993.729	Subsurface Soil	2.5-4.5	SVOCs	N/A	8270B		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-004	2083866.966	748993.729	Subsurface Soil	2.5-4.5	PCBs	N/A	8082		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-005	2083890.511	748992.551	Subsurface Soil	2.5-4.5	Radionuclides	HPGe	Alpha Spec		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-005	2083890.511	748992.551	Subsurface Soil	2.5-4.5	Metals	N/A	6010		Biased at PCB Transformer (estimated depth at bottom of slab)
CF38-005	2083890.511	748992.551	Subsurface Soil	2.5-4.5	SVOCs	N/A	8270B		Biased at PCB Transformer (estimated depth at bottom of slab)

IHSS/PAC/UBC Site	Location Code	Easting	Northing	Media	Depth Interval (feet)	Analyte	On-site Method	Off-site Method	Comment
CF38-005	2083890.511	748992.551	Subsurface Soil	2.5-4.5	PCBs	N/A	8082		Biased at PCB Transformer (estimated depth at bottom of slab)

N/A Not Applicable

Figure 1
IHSS Group 800-3
Location Map

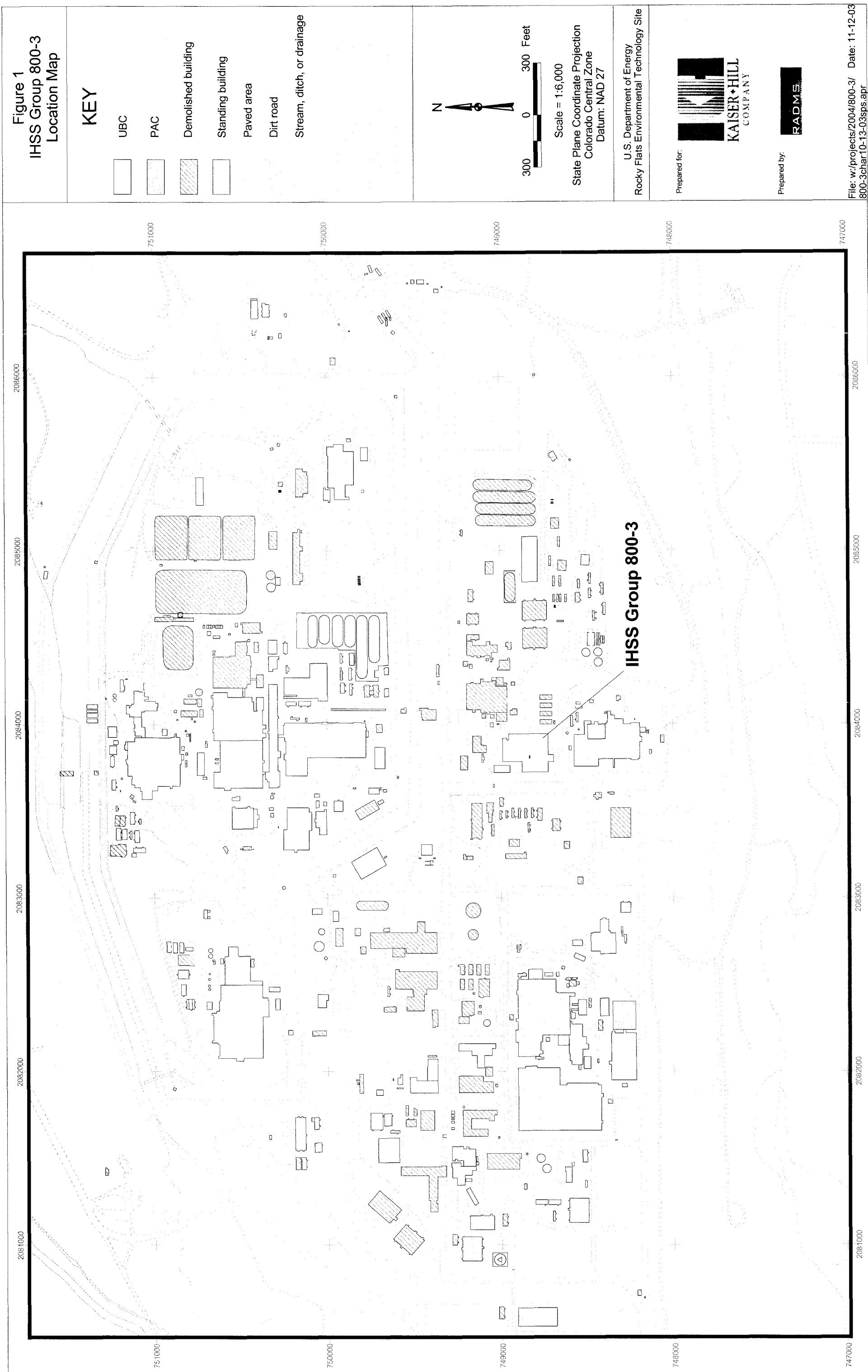
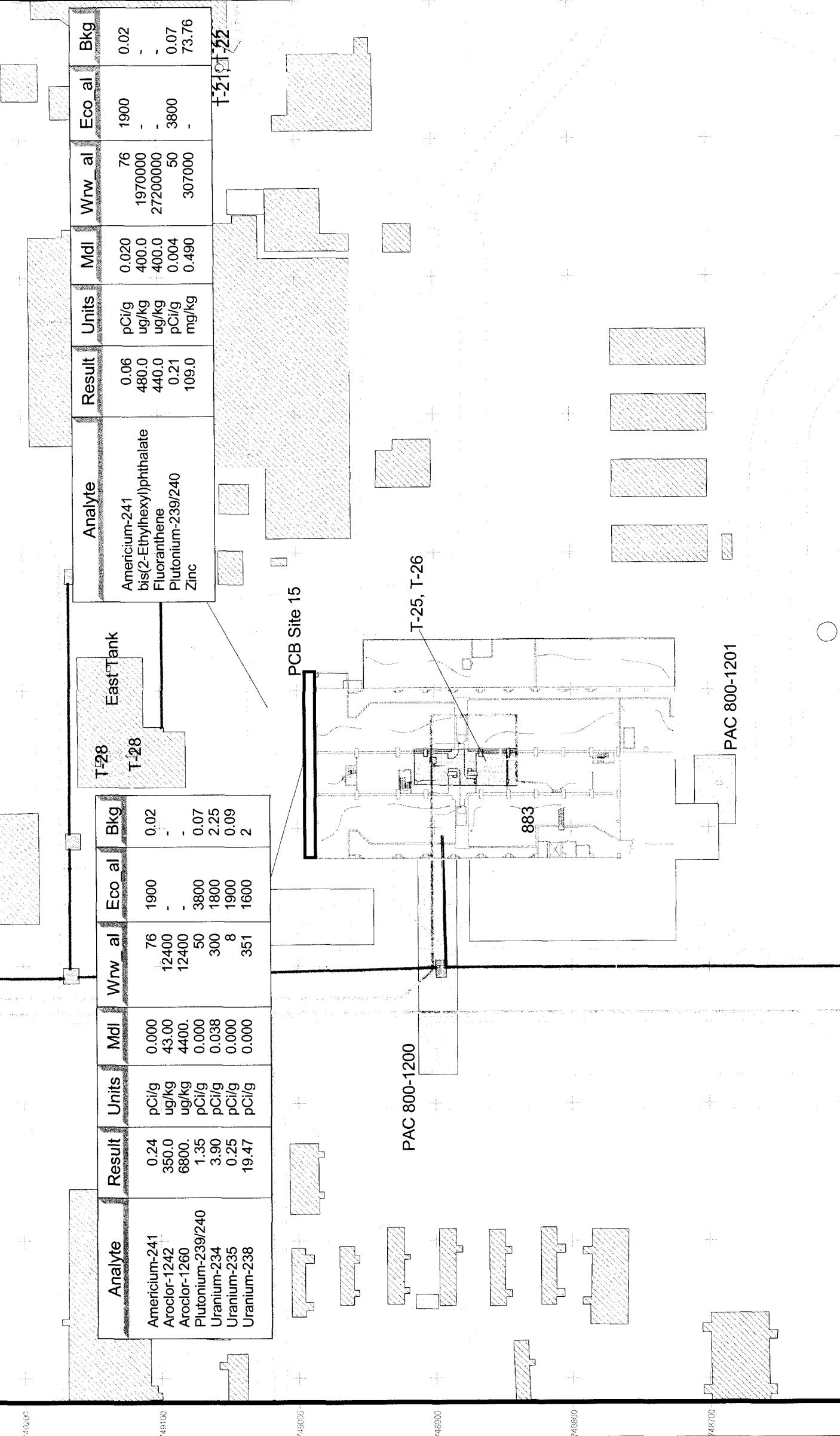


Figure 2

IHSS Group 800-3
Existing Sampling Locations With
Concentrations Greater Than
Background Means Plus Two
Standard Deviations or
Method Detection Limits

KEY

- Existing sampling location
- UBC
- PAC
- Demolished building
- Standing building
- Paved area
- Dirt road
- Stream, ditch, or drainage
- Foundation drain



Scale = 1:1,000

State Plane Coordinate Projection
 Colorado Central Zone
 Datum: NAD 27

U.S. Department of Energy
 Rocky Flats Environmental Technology Site

Prepared for:



Prepared by:

R.A.D.M.S.

File: w:\projects\2004\800-3\800-3cps.apr
 Date: 11-12-03
 800-3cps.apr

2084400
 2084400
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Figure 3
IHSS Group 800-3
Proposed Sampling Locations

